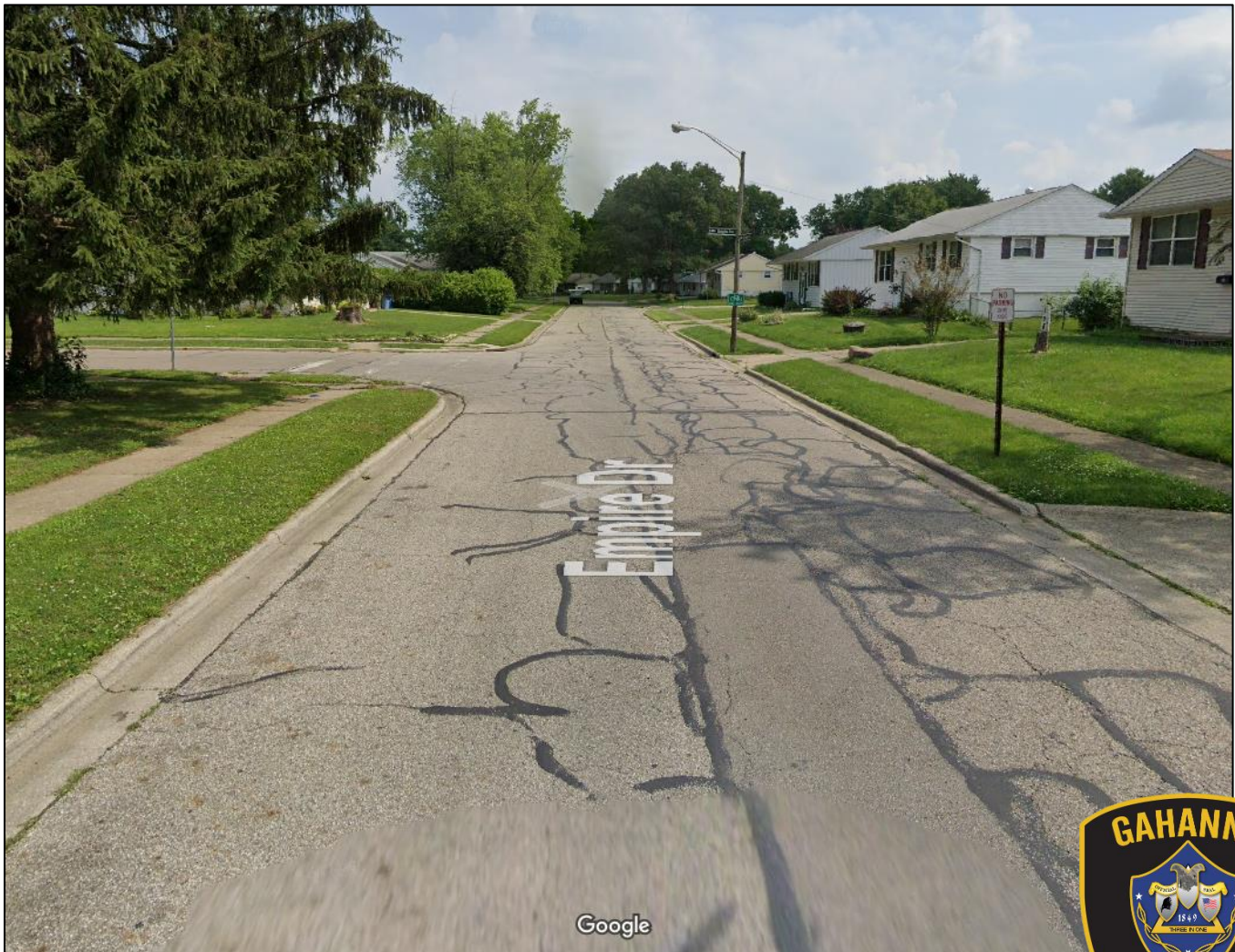


# Gahanna Division of Police

Jeffrey B. Spence, Chief of Police



## Field Services Subdivision

### Traffic Survey

### Empire Drive 08-03-21 to 08-23-21

460 Rocky Fork Blvd.

Gahanna, Ohio 43230

614-342-4240

[WWW.GAHANNA.GOV](http://WWW.GAHANNA.GOV)

**Survey Device:** Speed Monitoring and Notification Device (SMND) # 1129

**Survey Operator:** Lt. Ethan Moffitt # L-58

**Device Location:** Empire Drive near Knights Avenues

**Device Direction:** Facing southwest bound traffic (coming from the area of Knights Avenue)

**Speed Limit:** 25 MPH

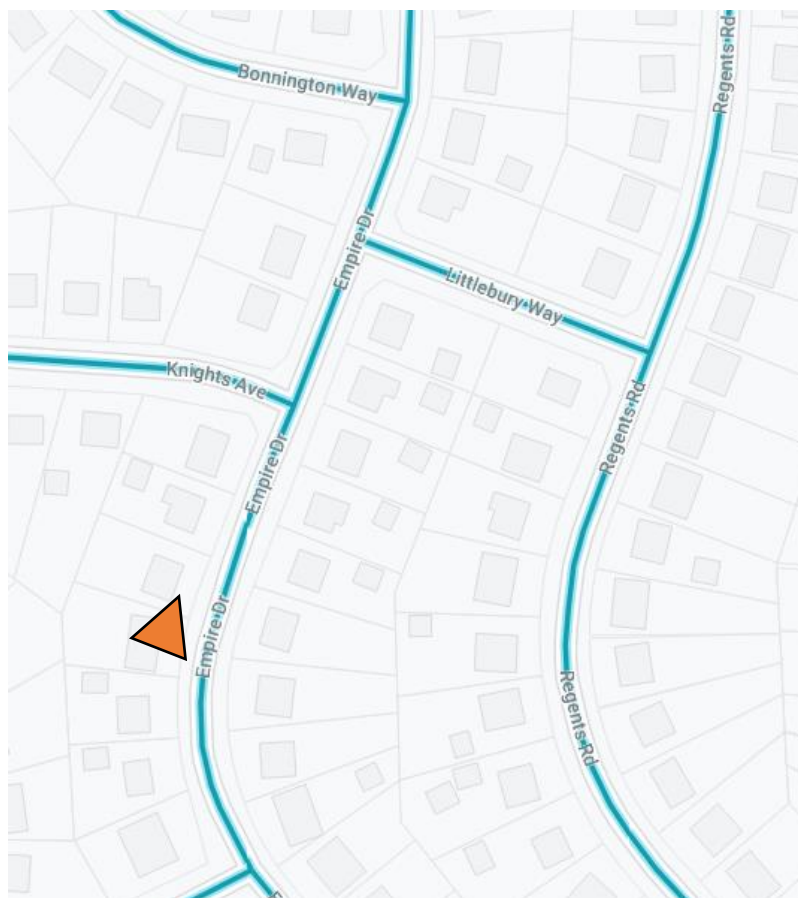
**Survey Dates:** 08-03-21 to 08-23-21

**Survey Reason:** Resident request for speed mitigation

### Summary –

On 08-03-21, SMND # 1129 was deployed on Empire Drive near Knights Avenue. The SMND recorded the speed of 27,139 vehicles (combined southwest and northeast bound traffic). Of those, 1,960 or 7%, were traveling in excess of the posted speed limit and 25,179, or almost 93%, were traveling below the speed limit. The average speed was 17.5 MPH, a relatively low average speed compared to other 25 MPH residential zones. The 85th percentile speed was 24 MPH, meaning that 85% of the vehicles were traveling at a speed of 24 MPH or less.

One hundred and five vehicles were traveling in excess of 35 MPH, accounting for less than 1% of the total count (13,569) and 5% of the over-limit count (1960). Conversely, 95% of vehicles traveling above the speed limit were going between 26 and 35 MPH. The survey results demonstrate that the presence of the SMND was an effective mitigation measure. There was substantial compliance with the posted speed limit during the deployment period and few excessive speed violations.



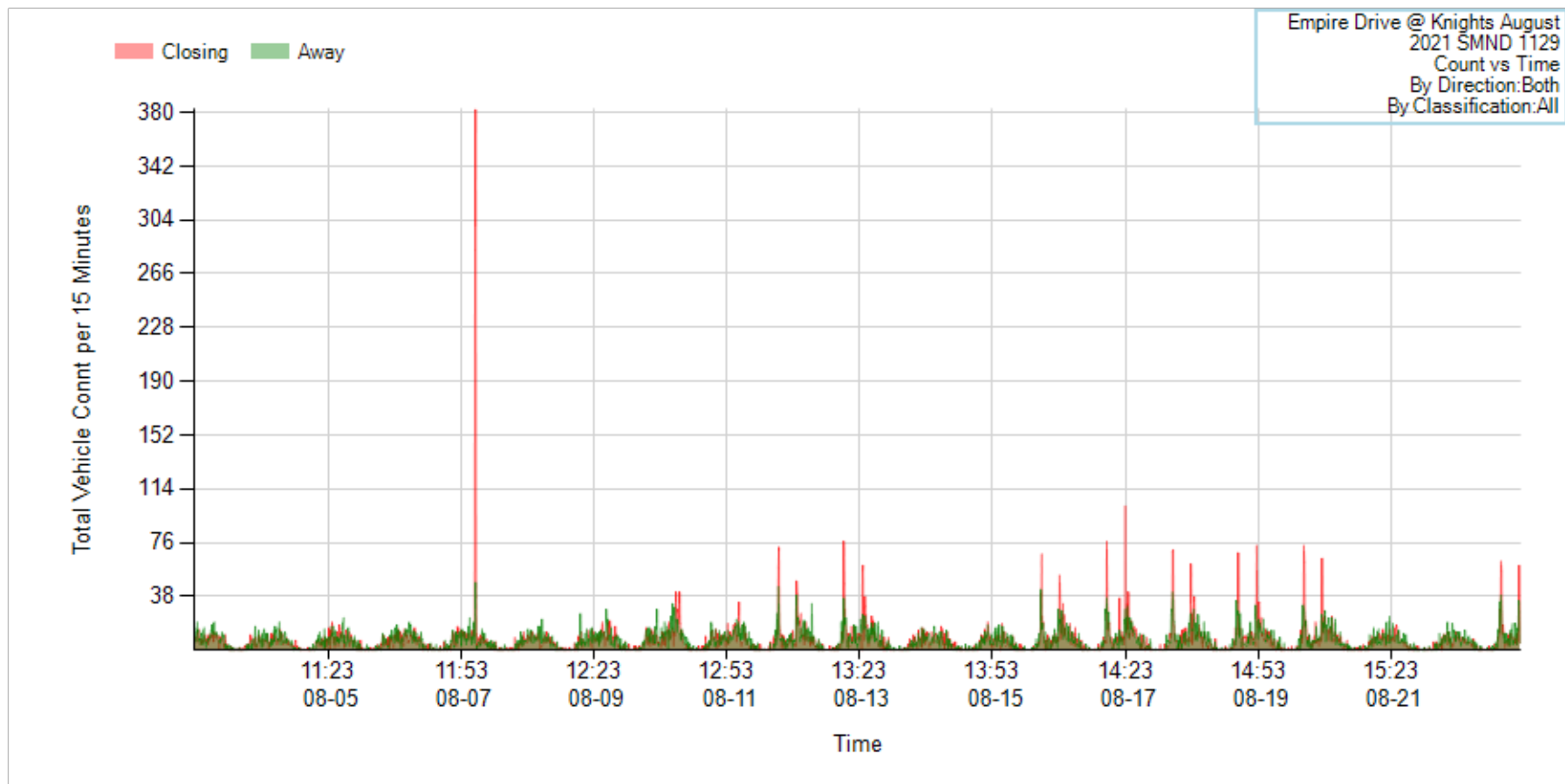


# GAHANNA DIVISION OF POLICE

## EMPIRE DRIVE - AUGUST 2021 SPEED SURVEY



Count vs. Time



Survey Name	Empire Drive @ Knights / Speed Unit		Miles/Hour	Average Speed	17.5	MPH	Total Volume	27139	100%
Start Date	2021-08-03	Speed Limit	25	Max Speed	69	MPH	Over Limit Count	1960	7.2%
Stop Date	2021-08-23			Min Speed	10	MPH	Under Limit Count	25179	92.8%
				85th Percentile	24	MPH	Over Threshold Count	105	0%
				10 MPH Pace	13 - 22	MPH	In Pace Count	13569	50.0%

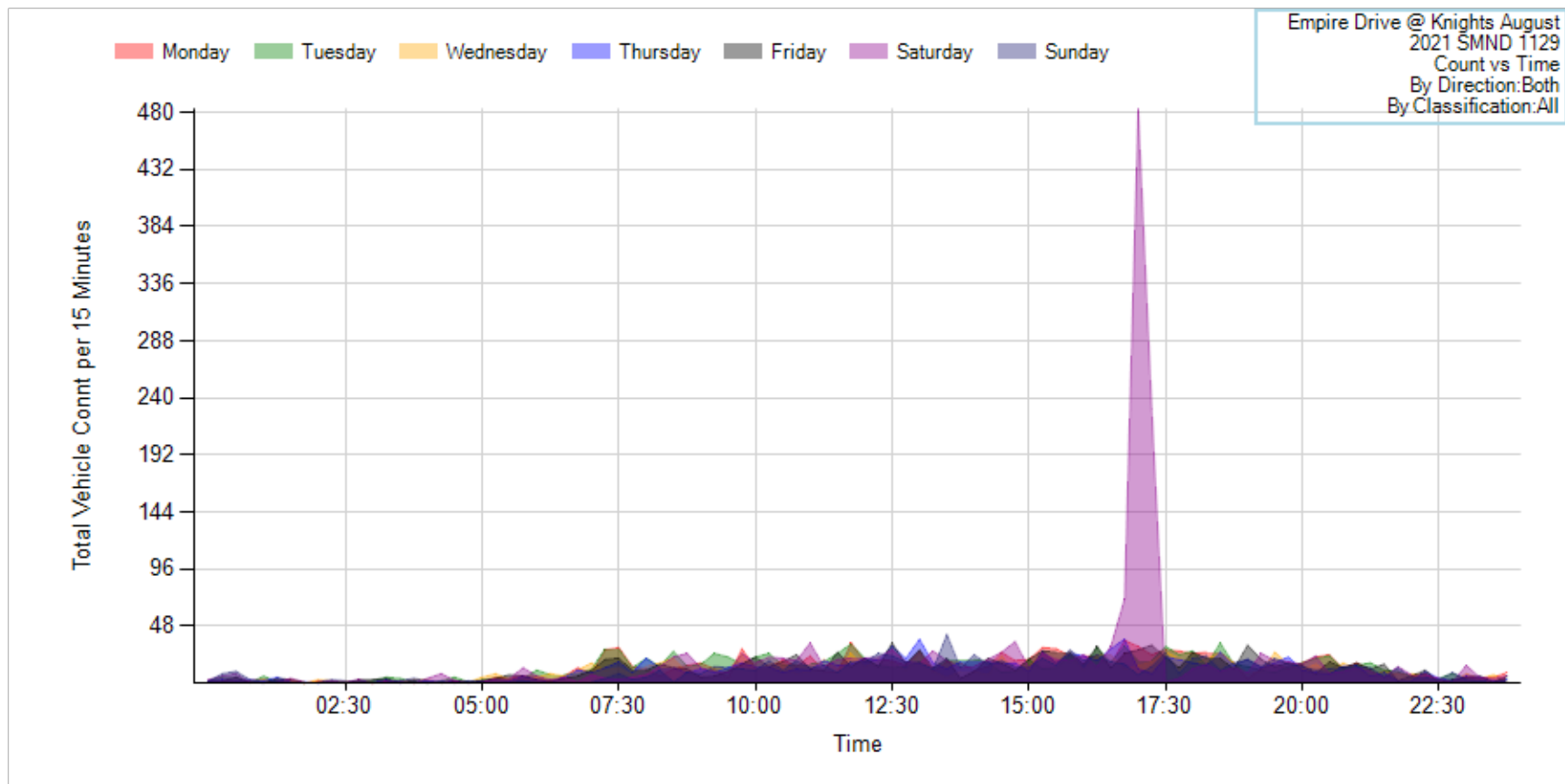


# GAHANNA DIVISION OF POLICE

## EMPIRE DRIVE - AUGUST 2021 SPEED SURVEY



Weekly Count vs. Time



Survey Name	Empire Drive @ Knights / Speed Unit		Miles/Hour	Average Speed	17.5	MPH	Total Volume	27139	100%
Start Date	2021-08-03	Speed Limit	25	Max Speed	69	MPH	Over Limit Count	1960	7.2%
Stop Date	2021-08-23			Min Speed	10	MPH	Under Limit Count	25179	92.8%
				85th Percentile	24	MPH	Over Threshold Count	105	0%
				10 MPH Pace	13 - 22	MPH	In Pace Count	13569	50.0%

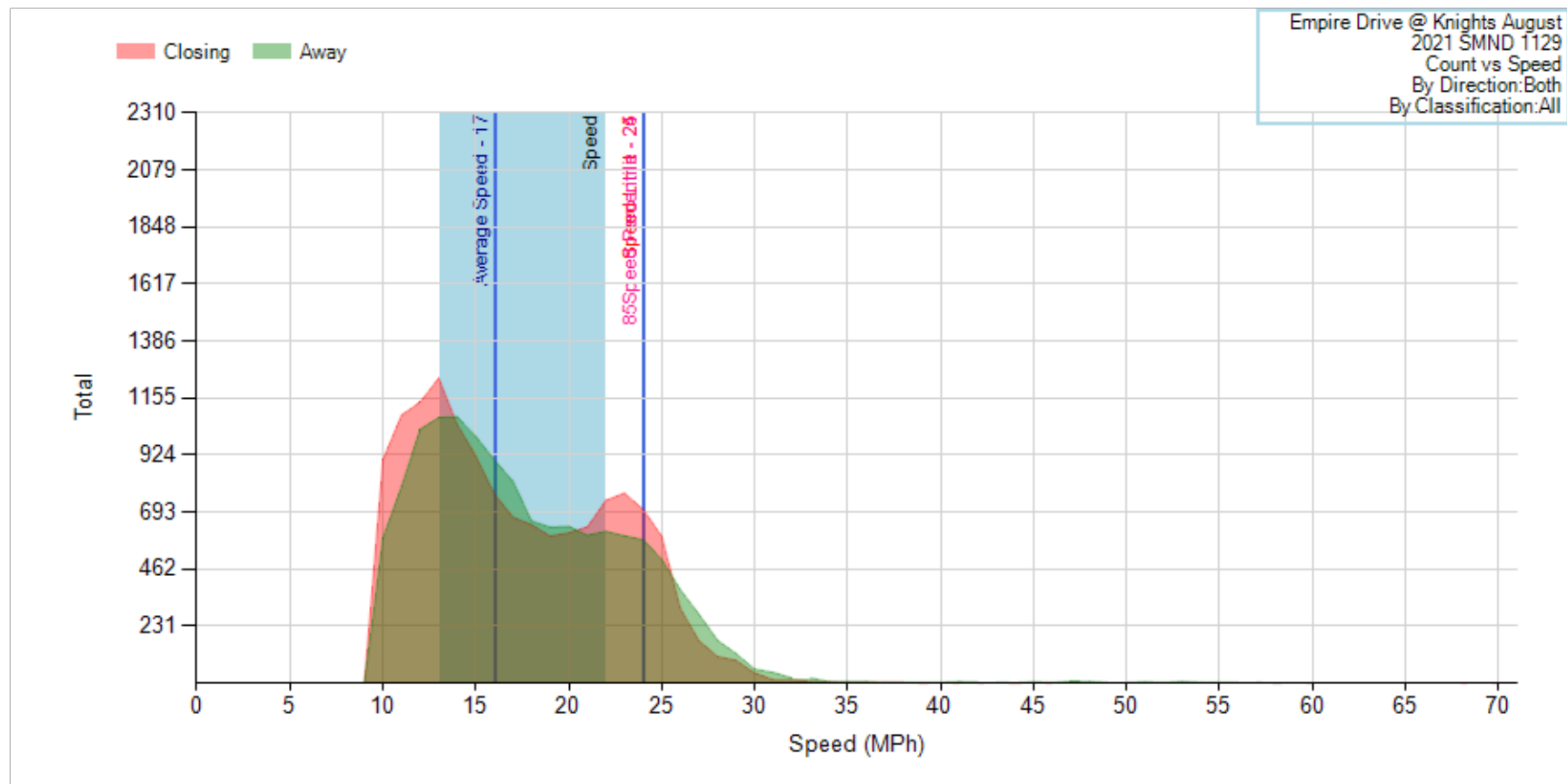


# GAHANNA DIVISION OF POLICE

## EMPIRE DRIVE - AUGUST 2021 SPEED SURVEY



Count vs. Speed



Survey Name	Empire Drive @ Knights / Speed Unit	Miles/Hour	Average Speed	17.5	MPH	Total Volume	27139	100%
Start Date	2021-08-03	Speed Limit	25	Max Speed	69	MPH	Over Limit Count	1960
Stop Date	2021-08-23			Min Speed	10	MPH	Under Limit Count	25179
				85th Percentile	24	MPH	Over Threshold Count	105
				10 MPH Pace	13 - 22	MPH	In Pace Count	13569

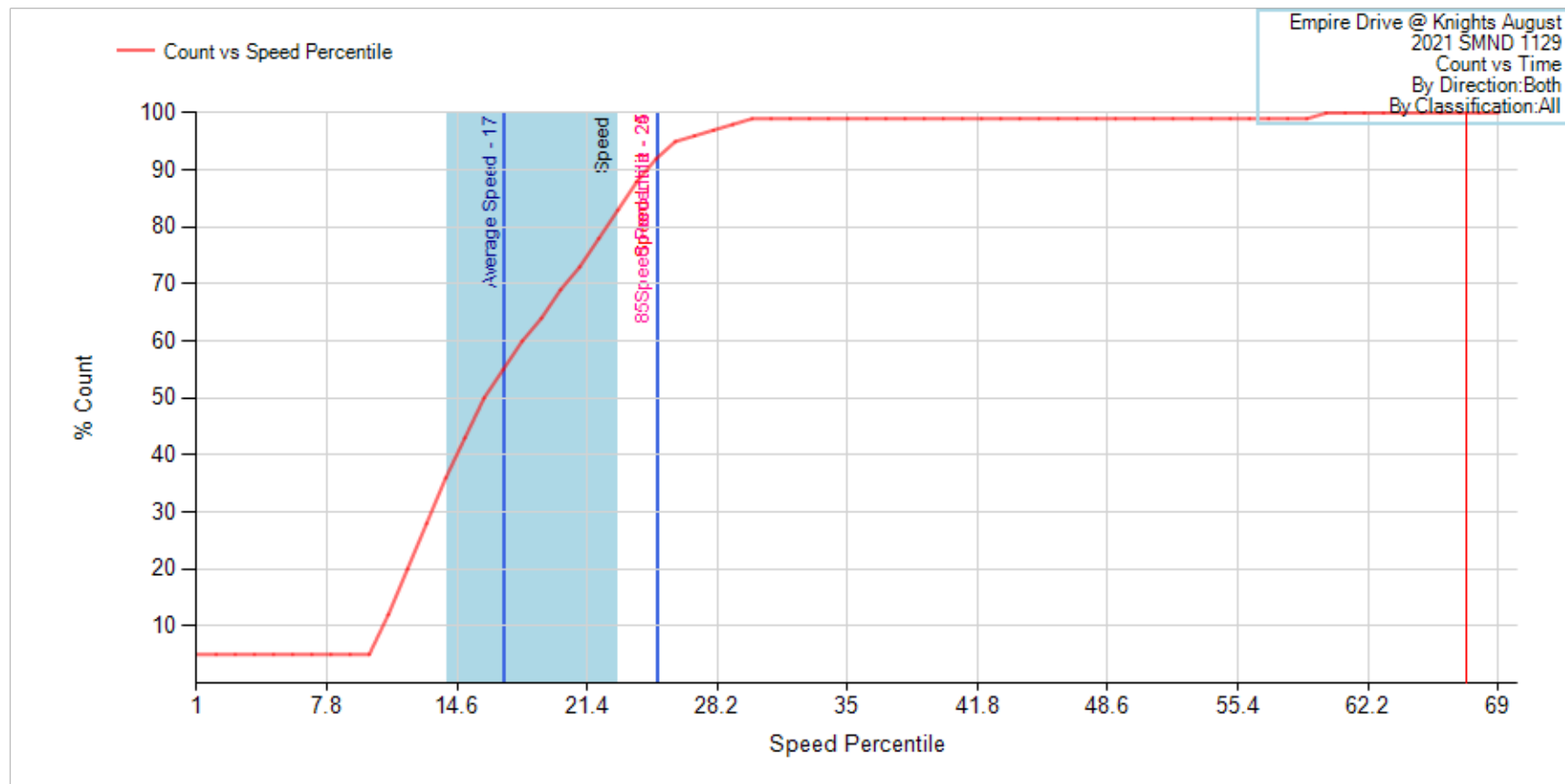


# GAHANNA DIVISION OF POLICE

## EMPIRE DRIVE - AUGUST 2021 SPEED SURVEY



Percentile Chart



Survey Name	Empire Drive @ Knights / Speed Unit		Miles/Hour	Average Speed	17.5	MPH	Total Volume	27139	100%
Start Date	2021-08-03	Speed Limit	25	Max Speed	69	MPH	Over Limit Count	1960	7.2%
Stop Date	2021-08-23			Min Speed	10	MPH	Under Limit Count	25179	92.8%
				85th Percentile	24	MPH	Over Threshold Count	105	0%
				10 MPH Pace	13 - 22	MPH	In Pace Count	13569	50.0%

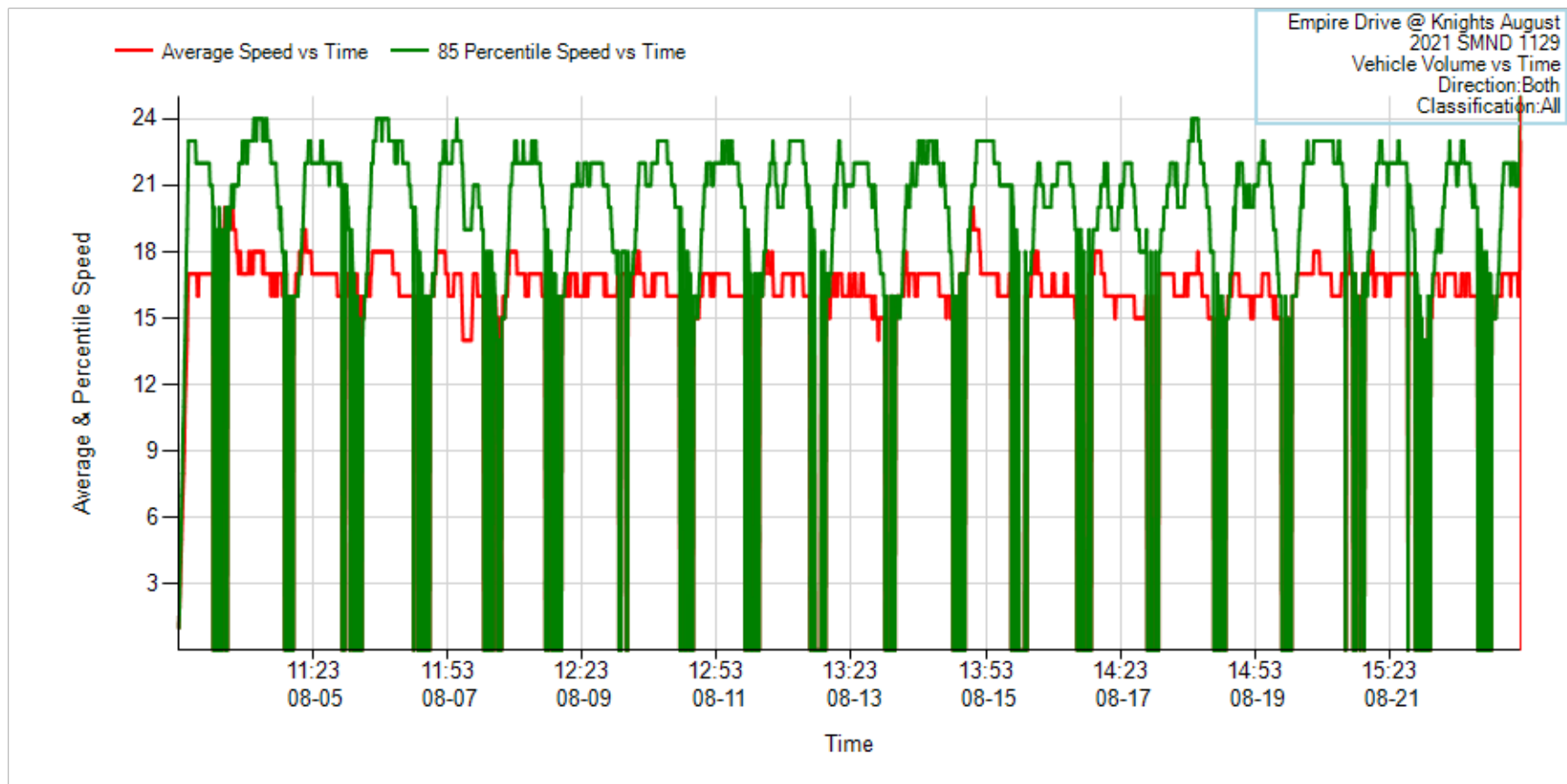


# GAHANNA DIVISION OF POLICE

## EMPIRE DRIVE - AUGUST 2021 SPEED SURVEY



Average Speed vs. Time



Survey Name	Empire Drive @ Knights /Speed Unit	Miles/Hour	Average Speed	17.5	MPH	Total Volume	27139	100%
Start Date	2021-08-03	Speed Limit	25	Max Speed	69	MPH	Over Limit Count	1960
Stop Date	2021-08-23			Min Speed	10	MPH	Under Limit Count	25179
				85th Percentile	24	MPH	Over Threshold Count	105
				10 MPH Pace	13 - 22	MPH	In Pace Count	13569

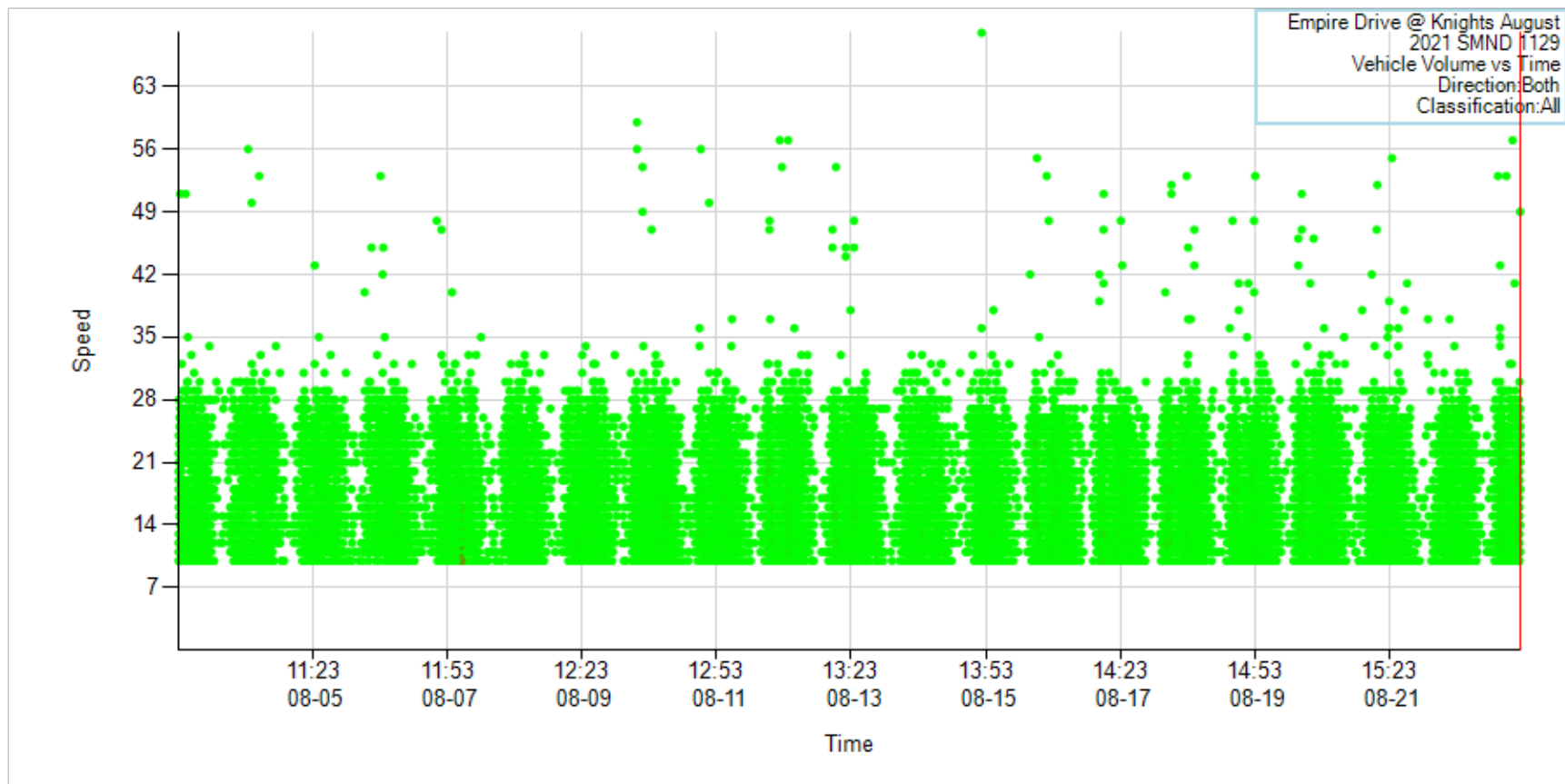


# GAHANNA DIVISION OF POLICE

## EMPIRE DRIVE - AUGUST 2021 SPEED SURVEY



Speed vs. Time Bubble Chart



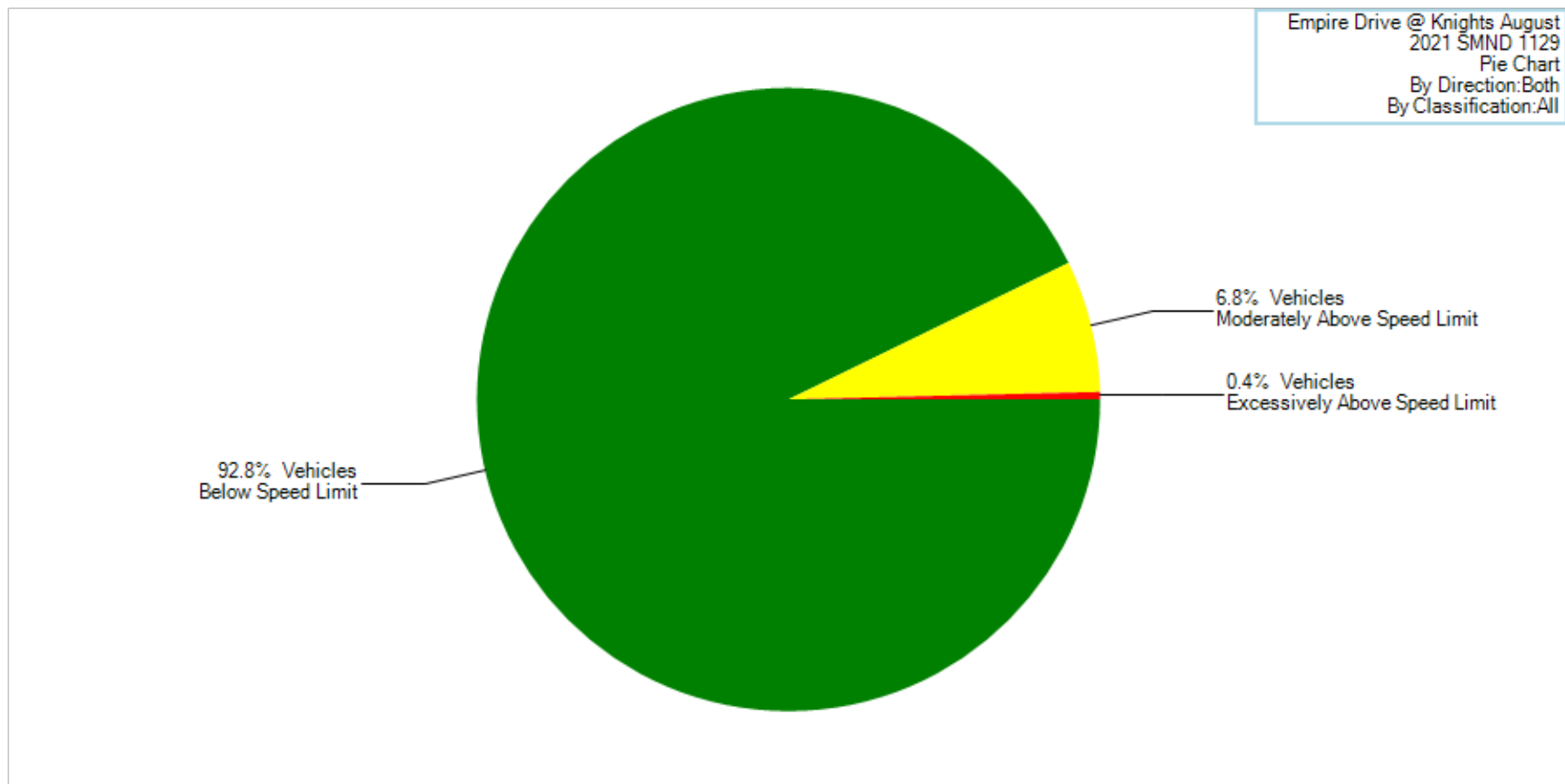
Survey Name	Empire Drive @ Knights / Speed Unit		Miles/Hour	Average Speed	17.5	MPH	Total Volume	27139	100%
Start Date	2021-08-03	Speed Limit	25	Max Speed	69	MPH	Over Limit Count	1960	7.2%
Stop Date	2021-08-23			Min Speed	10	MPH	Under Limit Count	25179	92.8%
				85th Percentile	24	MPH	Over Threshold Count	105	0%
				10 MPH Pace	13 - 22	MPH	In Pace Count	13569	50.0%



# GAHANNA DIVISION OF POLICE

## EMPIRE DRIVE - AUGUST 2021 SPEED SURVEY

Enforcement



Survey Name	Empire Drive @ Knights / Speed Unit	Miles/Hour	Average Speed	17.5	MPH	Total Volume	27139	100%
Start Date	2021-08-03	Speed Limit	25	Max Speed	69	MPH	Over Limit Count	1960
Stop Date	2021-08-23			Min Speed	10	MPH	Under Limit Count	25179
				85th Percentile	24	MPH	Over Threshold Count	105
				10 MPH Pace	13 - 22	MPH	In Pace Count	13569

## GAHANNA DIVISION OF POLICE

### EMPIRE DRIVE - AUGUST 2021 SPEED SURVEY

Survey Name	Empire Drive @ Knights Augu...	Location	175 Empire Drive ,Gahanna, ...	Speed Unit	Miles/Hour
Start	2021-08-03 10:53	Traffic Direction	Undefined	Speed Limit	25
Stop	2021-08-23 14:40	Zone	Normal	Min Speed Threshold	10
Operator	000	Min Following Time	0.0	Max Speed Threshold	120
Survey Direction	Both	Time Resolution	1	Speed Resolution	1

Total Vehicle Connt	27139	100%	Average Speed	17.5	MPH	In Pace Count	13569	49%
Under Limit Count	25179	92%	Minimum Speed	10	MPH	10 mph Pace	13 - 22	MPH
Over Limit Count	1960	8%	Maximum Speed	69	MPH	Standard Deviation	5	MPH
10 Over Limit Count	105	0%	85Speed Percentile	24	MPH	Average Speed Over Limit	28.4	MPH



## Survey Report Quick Guide/Reference

### Over Threshold Count

The default threshold (amount over the posted speed limit) is 10 MPH. The **Over Threshold Count** is the number of vehicles traveling in excess of the selected threshold. For example, if the threshold is set at the 10 MPH default, this would indicate the number of vehicles (within the Total Volume) that were traveling at 10 MPH over the posted limited.

### Count vs. Time

The **Count vs Time Chart** shows the number of vehicles per unit of time traveling on the monitored roadway.

### Weekly Count vs. Time Chart

The **Weekly Count vs. Time Chart** mode shows the vehicle count per day over a 7-day period. If the survey period extends beyond one 7- day week, the values of each overlapped week day will be the average values for those overlapped week days.

### Count vs. Speed Chart

The **Count vs. Speed Chart** selection shows the total vehicle count for each speed group. The size of the speed group can be set by the operator (**Speed Resolution** selection in the **Analysis Control**).

### Percentile Chart

The **Percentile Chart** shows the cumulative percentage of vehicles that are at or below a given speed

### Average Speed vs. Time Chart

The **Average Speed vs. Time Chart** shows the average and the 85<sup>th</sup> Percentile Speeds of the vehicles over time.

### Speed vs. Time Bubble Chart

The **Speed vs. Time Bubble Chart** plots both vehicle speed and volume against time. The size of the bubble represents the number of cars at a particular speed group at a particular time. This chart is useful in showing traffic bunching.

### Average Speed

The average speed of all vehicles

### 85Speed Percentile

The speed at which 85% of the traffic was traveling **at or less than**. The 85<sup>th</sup> percentile is considered to be a key metric because it is generally considered to representative of prevailing traffic conditions (the speed vehicles on the roadway are going most of the time).